

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method for controlling at least one computing element with a universal console (~~UC~~), comprising:

receiving input from a user indicative of at least one user preference ~~for a universal console~~, wherein said at least one user preference defines at least one generalized rule characterizing one of the group consisting of a visual, an aural, and a tactile mode of communication;

storing the at least one user preference;

selecting a computing element to control with the universal console;

receiving by the universal console a canonical user interface (~~UI~~) description representative of the computing element's user interface, wherein the canonical user interface description ~~is pre-defined for the computing element and~~ includes at least one action-command operable to control said computing element;

instantiating a user interface ~~description by the universal console~~, said user interface providing at least one prompt for said user to select said at least one action-command, wherein said at least one prompt is provided in accordance with said ~~as a function of the~~ stored at least one user preference and the canonical user interface description;

selecting at least one action-command to be carried out by the computing element using said user interface; and

transmitting to the computing element data associated with said at least one action-command using a remote procedure call mechanism.

2. (Original) A method according to claim 1, wherein said selecting at least one action-command includes requesting information about the state of said at least one computing element.

3. (Original) A method according to claim 1, further comprising interacting with at least one group hierarchy to obtain data in connection with said selected at least one action-command to be carried out by the computing element.

4. (Original) A method according to claim 1, wherein said storing includes storing data indicating at least one disability of the user.

5. (Original) A method according to claim 1, further including carrying out said action-command by said computing element.

6. (Original) A method according to claim 1, further including receiving by the UC notifications from the computing element.

7. (Original) A method according to claim 6, wherein said notifications include at least one of an error message, warning message, status update message and state change.

8. (Original) A method according to claim 1, wherein said canonical UI representation is formatted according to an XML stream.

9. (Original) A method according to claim 1, further including requesting a list of available devices that may be controlled by UC.

10. (Original) A method according to claim 1, wherein communications between said UC and said computing element are made via Hypertext Transfer Protocol (HTTP).

11. (Original) A method according to claim 1, wherein said computing element is one from the group of a computing device and an application.

12. (Previously presented) A method according to claim 1, wherein said remote procedure call mechanism makes calls according to Simple Object Activation Protocol (SOAP).

13. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter for choosing one element a from a set A .

14. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter for selecting a subset A' from a set A .

15. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter for selecting one from the group of True/False, Off/On, OK/Cancel and Yes/No.

16. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter for selecting an integer n in the range n_1 through n_2 , with increment δ .

17. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter for selecting a real number x in the range x_1 through x_2 , with increment δ .

18. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter type for an arbitrary string s .

19. (Original) A method according to claim 18, wherein said arbitrary string s is to be selected from a suggestion set of strings S .

20. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter type for the modification of a given first string s , resulting in a second string s' .

21. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter type for ordering the elements of set *A* into *A'*.

22. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter type for pairing set *A* elements with set *B* elements.

23. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a group construct that contains at least one of commands and subgroups.

24. (Original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a command construct that specifies at least one action to send to the controlled element that will carry out the action-command.

25. (Original) A method according to claim 24, wherein said canonical UI representation includes a description of the parameters associated with the at least one action.

26-41. (Canceled)

42. (Currently amended) A computer system comprising at least one universal console (~~UC~~) and at least one computing element, operable to allow a user to control said at least one computing element, said system comprising:

at least one computing element having a ~~pre-defined~~ canonical user interface description (~~UI~~) associated therewith, wherein said canonical user interface includes at least one action-command operable to control said computing element;

a universal console for controlling said at least one computing element and operable to store user preferences input to the computer system by the user, wherein said user preferences define at least one generalized rule characterizing one of the group consisting of a visual, an aural and a tactile mode of communication;

wherein said at least one computing element communicates its associated canonical user interface description to said universal console;

wherein said universal console instantiates a [[a]] user interface ~~description~~ as a function of said canonical user interface description and said stored user preferences; and

wherein, thereafter, said universal console is operable to control said computing element via said user interface description by user-selection of said at least one action-command.

43. (Previously presented) A computer system according to claim 42, wherein said user selection includes requesting information about the state of said at least one computing element.

44. (Previously presented) A computer system according to claim 42, wherein said UC is operable to enable a user to interact with at least one group hierarchy to obtain data in connection with said selected at least one action-command to be carried out by the computing element.

45. (Original) A computer system according to claim 42, wherein said storage of user preferences includes the storage of data indicating at least one disability of the user.

46. (Original) A computer system according to claim 42, wherein said at least one computing element carries out said at least one action-command.

47. (Original) A computer system according to claim 42, wherein said UC receives notifications from the at least one computing element.

48. (Original) A computer system according to claim 47, wherein said notifications include at least one of an error message, warning message, status update message and state change.

49. (Original) A computer system according to claim 42, wherein said canonical UI description is formatted according to an XML stream.

50. (Previously presented) A computer system according to claim 42, wherein said user-selection includes requesting a list of available devices that may be controlled by UC.

51. (Original) A computer system according to claim 42, wherein communications between said UC and said computing element are made via Hypertext Transfer Protocol (HTTP).

52. (Original) A computer system according to claim 42, wherein said computing element is one from the group of a computing device and an application.

53. (Previously presented) A computer system according to claim 42, wherein said remote procedure call mechanism makes calls according to Simple Object Activation Protocol (SOAP).

54. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter for choosing one element a from a set A .

55. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter for selecting a subset A' from a set A .

56. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter for selecting one from the group of True/False, Off/On, OK/Cancel and Yes/No.

57. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter for selecting an integer n in the range n_1 through n_2 , with increment δ .

58. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter for selecting a real number x in the range x_1 through x_2 , with increment δ .

59. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter type for an arbitrary string s .

60. (Original) A computer system according to claim 59, wherein said arbitrary string s is to be selected from a suggestion set of strings S .

61. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter type for the modification of a given first string s , resulting in a second string s' .

62. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter type for ordering the elements of set A into A' .

63. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter type for pairing set A elements with set B elements.

64. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a group construct that contains at least one of commands and subgroups.

65. (Original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a command construct that specifies at least one action to send to the controlled element that will carry out the action-command.

66. (Original) A computer system according to claim 65, wherein said canonical UI description includes a description of the parameters associated with the at least one action.

67. (Currently amended) A computer readable storage medium comprising computer executable instructions for controlling at least one computing element with a universal console (\mathcal{UC}), comprising:

means for receiving input from a user indicative of at least one user preference ~~for a universal console~~, wherein said at least one user preference defines at least one generalized rule characterizing one of the group consisting of a visual, an aural and a tactile mode of communication;

means for storing the at least one user preference;

means for selecting a computing element to control with the universal console;

means for receiving by the universal console a canonical user interface ~~(UI)~~ description representative of the computing element's user interface, wherein the canonical user interface description ~~is pre-defined for the computing element and~~ includes at least one action-command operable to control said computing element;

means for instantiating a user interface ~~description by the universal console as a function of~~, said user interface providing at least one prompt for said user to select said at least one action-command, wherein said at least one prompt is provided in accordance with the canonical user interface description and the stored at least one user preference;

means for selecting at least one action-command to be carried out by the computing element using said user interface; and

means for transmitting to the computing element data associated with said at least one action-command.